



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SCIENCE

EDITORIAL COMMITTEE: S. NEWCOMB, Mathematics; R. S. WOODWARD, Mechanics; E. C. PICKERING, Astronomy; T. C. MENDENHALL, Physics; R. H. THURSTON, Engineering; IRA REMSEN, Chemistry; J. LE CONTE, Geology; W. M. DAVIS, Physiography; HENRY F. OSBORN, Paleontology; W. K. BROOKS, C. HART MERRIAM, Zoology; S. H. SCUDDER, Entomology; C. E. BESSEY, N. L. BRITTON, Botany; C. S. MINOT, Embryology, Histology; H. P. BOWDITCH, Physiology; J. S. BILLINGS, Hygiene; J. McKEEN CATTELL, Psychology; J. W. POWELL, Anthropology.

FRIDAY, DECEMBER 1, 1899.

THE ASTRONOMICAL AND ASTROPHYSICAL
SOCIETY OF AMERICA.

CONTENTS:

<i>The Astronomical and Astrophysical Society of America, I:</i>	PROFESSOR EDWIN B. FROST...	785
<i>Address of the President before the Section of Geography of the British Association for the Advancement of Science, II:</i>	SIR JOHN MURRAY.....	796
<i>Recent Progress in Oceanography:</i>	A LINDEN-KOHL	803
<i>Observations on Rhythmic Action:</i>	DR E. W. SCRIPTURE.....	807
<i>Geology at the British Association:</i>	PROFESSOR W. W. WATTS	812
<i>Scientific Books:—</i>		
<i>The Mysterious Mammal of Patagonia:</i>	J. B. HATCHER.	
<i>The Maryland Weather Service:</i>	R. DEC. WARD.	
<i>Cohn on Indicators and Test Papers:</i>	M. T. B. Martin and Müller's zur Analyse der Unterschiedsempfindlichkeit.	
	DR. R. S. WOODWORTH.	
<i>General. Books Received</i>		814
<i>Notes on Inorganic Chemistry:</i>	J. L. H.....	819
<i>Technical University Degrees:</i>	PROFESSOR R. H. THURSTON	820
<i>Lectures at the American Museum of Natural History</i>		821
<i>Scientific Notes and News</i>		821
<i>University and Educational News</i>		824

I.

THE third conference of Astronomers and Astrophysicists was held at the Yerkes Observatory, in Williams Bay, Wisconsin, on September 6, 7 and 8, 1899, in accordance with arrangements made by a committee appointed at the second conference, held at Harvard College Observatory in August of last year. This committee, consisting of Professors Newcomb, Pickering, Morley, Comstock and Hale, had also been authorized to prepare a constitution and arrange for the organization of a permanent society. At the second session of the conference the constitution was adopted, substantially as presented by the committee, and at the last session, on September 8th, the organization was completed with the election of the following officers:

President, Simon Newcomb; Vice-Presidents, C. A. Young, G. E. Hale; Secretary, G. C. Comstock; Treasurer, C. L. Doolittle; Councilors, for two years, E. C. Pickering, J. E. Keeler; Councilors, for one year, E. W. Morley, Ormond Stone.

The undersigned will temporarily act as Secretary.

At a subsequent meeting of the Council by-laws were adopted. It was further voted that a report of the proceedings should be furnished for publication in SCIENCE, to-

effect of these various factors. This is a sort of quantitative analysis, which, though of purely technical interest, would have its value for psychology, could we but be sure of our numerical basis. When unfortunately there are, as in the present instance, three or more variable factors at our disposal, no one of which is a determined function of any other quantity, the field for arbitrary assumption of values is so wide that we have no means of checking our computation.

The real value of the work is that it points out several incidental factors in the process of judging. The more closely actual judgments are studied, the more evident does it become that they do not proceed according to the clean logical schemes which we are prone to devise for them in advance.

R. S. WOODWORTH.

GENERAL.

THE American Museum of Natural History, New York City, proposes to publish a selection of photographs collected by members of the Jesup North Pacific Expedition, provided a sufficient number of subscriptions can be obtained to warrant the undertaking. The photographs are to be reproduced by the heliotype process, in large quarto form. The edition will be limited to 250 copies. It is intended to issue the album in parts of at least 24 plates annually, the whole series to embrace 120 plates. It is contemplated to publish during the first year a series illustrating Indian types from the interior of British Columbia.

THE University of the State of New York has issued Museum Bulletin 24, supplementing the report of the entomologist for 1898, which is a memorial of the life and entomological work of Dr. Lintner. This contains a consolidated index to his whole series of reports and gives a nearly, if not quite, complete list of his scientific contributions during a long series of years. This volume of 316 pages will be sent postpaid to any address for 35 cents. Bulletin 28 is a pamphlet of 202 pages on the plants of North Elba, which will be much appreciated by the frequenters of that beautiful region. Its price postpaid is 20 cents. In University Handbook 16, the State Entomologist explains the scope and public utility of his

field of work. This series of handbooks gives in convenient form information frequently called for regarding the various divisions of the university work, and single copies are mailed free to any address.

BOOKS RECEIVED.

The Nervous System and its Constituent Neurones. LEWELLYS F. BARKER. New York, D. Appleton & Co. 1899. Pp. xxxii + 1122.

Chemistry, its Evolution and Achievements. FERDINAND G. WIECHMANN. New York, Jenkins. 1899. Pp. vii + 176.

The Family of the Sun, Conversations with a Child. EDWARD S. HOLDEN. New York, D. Appleton & Co. 1899. Pp. xxiv + 252. 50c.

Handbook of Practical Hygiene. D. H. BERGEY. Easton, Pa., The Chemical Publishing Co. 1899. Pp. 164.

NOTES ON INORGANIC CHEMISTRY.

THE larger works on descriptive chemistry are full of compounds whose existence is doubtful, and it becomes the sometimes thankless task of the chemists of to-day to go over this old work and verify or prove false the work of earlier observers. An instance of this appears in the last *Journal* of the Chemical Society (London) in the case of the suboxid of phosphorus P_4O . The existence of such a compound, discovered by Le Verrier in 1838 was, indeed, called in question by von Schrötter in 1852, as he considered it merely an impure form of the red ('amorphous') phosphorus, which had not long before been discovered by him. In 1880, however, Goldschmidt and Reinitzer prepared a red substance which resembled Le Verrier's 'suboxid' and the existence of P_4O seemed to be confirmed. But now Chapman and Lidbury have gone over the whole subject, have prepared and analyzed every substance which has been described by different observers as 'suboxid' and come to the conclusion that the supposed suboxid P_4O is identical with red phosphorus in a finally divided and superficially somewhat oxidized and hydrated condition. No compound of definite composition could be found.

THE problem of softening hard waters for industrial purposes is one of the great problems of applied chemistry. Such softening is not merely necessary for boiler waters, but it has